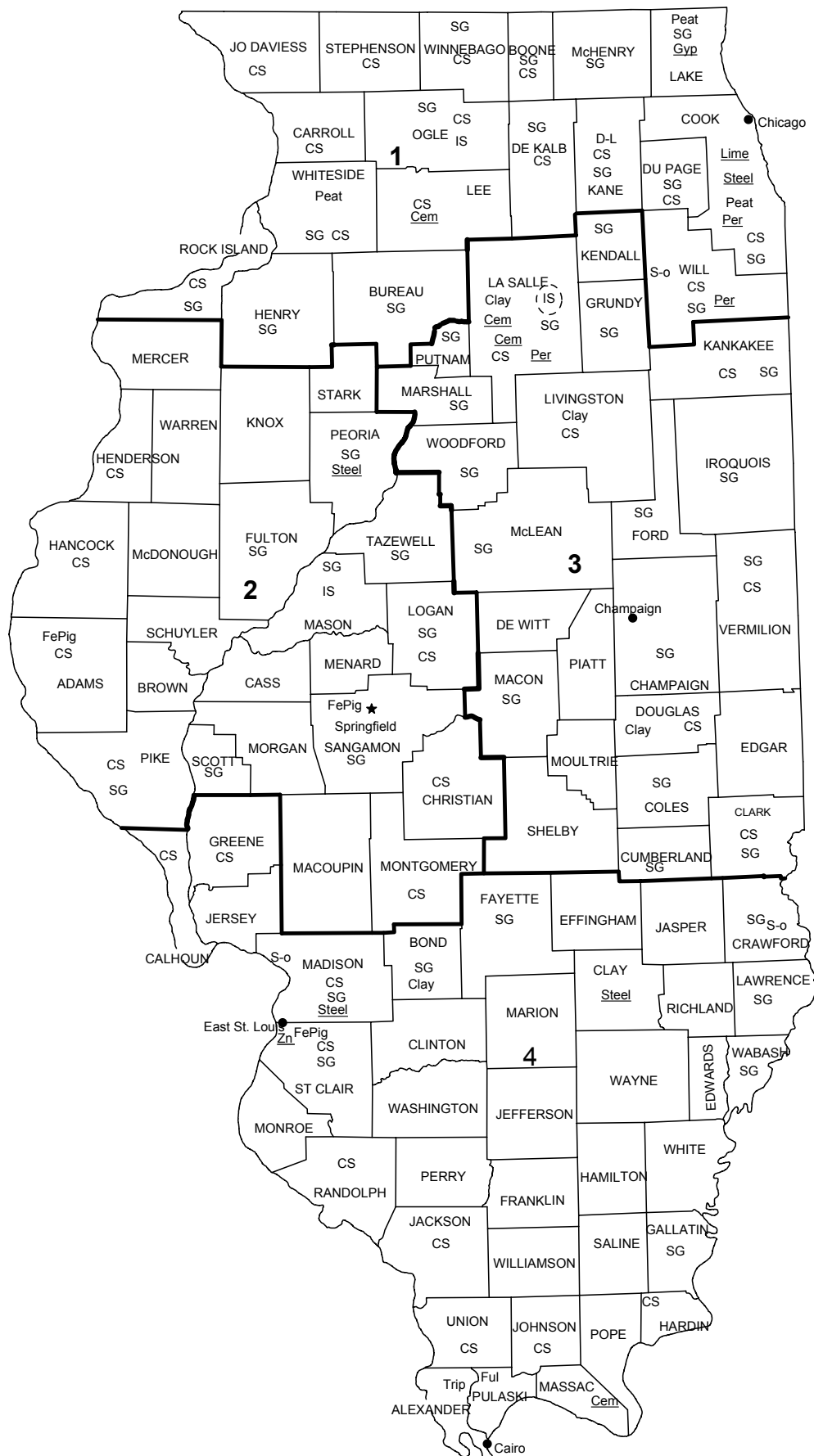


ILLINOIS



LEGEND

County boundary

★ Capital

● City

1 — Crushed stone/sand and gravel districts

MINERAL SYMBOLS (Major producing areas)

Cem Cement plant

Clay Common clay

CS Crushed stone

D-L Dimension limestone

FePig Iron oxide pigments

Ful Fuller's earth

Gyp Gypsum plant

IS Industrial sand

Lime Lime plant

Peat Peat

Per Perlite plant

S-o Sulfur (oil)

SG Construction sand and gravel

Steel Steel plant

Trip Tripoli

Zn Zinc plant

○ Concentration of mineral operations

0 50 Kilometers

THE MINERAL INDUSTRY OF ILLINOIS

This chapter has been prepared under a Memorandum of Understanding between the U.S. Geological Survey and the Illinois State Geological Survey for collecting information on all nonfuel minerals.

In 2003, the estimated value¹ of nonfuel mineral production for Illinois was \$911 million, based upon preliminary U.S. Geological Survey (USGS) data. This was down about 1% from that of 2002² and followed a 7.7% decrease from 2001 to 2002. The State remained 16th in rank among the 50 States in the total value of its nonfuel raw mineral production and accounted for about 2.5% of the U.S. total.

Industrial minerals accounted for all of Illinois' nonfuel mineral production in 2003; metals have not been produced from mines in the State since 1996 when small quantities of copper, lead, silver, and zinc were produced. In 2003, crushed stone, by value, remained the State's leading nonfuel mineral commodity, accounting for about 46% of the total nonfuel mineral value, followed by, in descending order of value, portland cement, with about 23%; construction sand and gravel, with nearly 17%; industrial sand and gravel, with about 8%; and lime, fuller's earth, and tripoli, with most of the remaining 6%. All other nonfuel minerals each accounted for less than one-half of 1% of the State's total (table 1).

In 2002, the production levels and values of most of the State's nonfuel mineral commodities fell; the largest decreases in value decreases were, in descending order of change, for crushed stone, which was down \$28 million; fuller's earth and construction sand and gravel, which were each down \$10 million; portland cement, down \$10 million; and lime, down more than \$5 million. The production levels and values of common clays, gemstones, industrial sand and gravel, and tripoli all increased during 2003 (table 1).

Based upon USGS estimates of the quantities of minerals produced in the other 49 States during 2003, Illinois continued to rank first in the production of industrial sand and gravel; first in the production of tripoli among the 4 States that produce tripoli; fourth in the production of peat; and ninth in the production of portland cement. The State rose to fifth in rank from seventh in the production of fuller's earth and decreased to fifth from fourth in crushed stone. It continued to be a significant producer of construction sand and gravel and lime. Raw steel was produced in Illinois, but it was processed from materials obtained from other domestic and foreign sources. Illinois rose to third in rank from fourth in the manufacture of raw steel with an output of about 6.5 million metric tons (Mt) (American Iron and Steel Institute, 2004, p. 76).

The following narrative information was provided by the Illinois State Geological Survey³ (ISGS).

Exploration and Development Activities

Increased demand for aggregate and a decline in the reserves of existing quarries sparked the search for new mining areas. In northeastern Illinois, the aggregate industry explored the feasibility of underground mining. Vulcan Materials Company developed two mines to extract resources from the Ordovician Galena and Platteville Groups in Cook County; one at Lemont and another, in collaboration with Bluff City Materials, in Bartlett. Exploration for other underground mine sites was continued by several companies in the Chicago area. The McHenry County Zoning Board allowed Maple Valley Materials LLC of Woodstock to open a gravel pit and concrete-recycling business in Riley Township. The board agreed that a gravel pit would be a reasonable use for the land and that there was enough economic demand for the product. However, the board placed 22 conditions on the company's zoning petition to fulfill the County's building and ground water codes and to address the public's safety and health concerns. Under a new 10-year agreement, the village of Thornton, IL, was to receive more than \$300,000 per year from Material Service Corp.'s Thornton Quarry. In past decades, the payment had been less than half that amount. However, in light of complaints and lawsuits from nearby residents and the threat of a mining tax, the company settled on this payment of \$300,000 per year. This amount will be adjusted each year, according to the "producer's price index," which is based on calculations from the U.S. Department of Labor. A sand-and-gravel operation in Blackberry Township, Kane County, was to be allowed to expand, pending approval of the Zoning Board. If approved, the Feltes Sand & Gravel Company, Inc. would be allowed to roughly double the size of its operation to more than 86 hectares (ha) and to add a ready-mixed concrete plant. The plan was backed by the Zoning Board's Development Committee and the Zoning Board of Appeals. Bartlett-based Bluff City Materials, Inc., a sand-and-gravel operation, received the support of the Bartlett planning

¹The terms "nonfuel mineral production" and related "values" encompass variations in meaning, depending upon the mineral products. Production may be measured by mine shipments, mineral commodity sales, or marketable production (including consumption by producers) as is applicable to the individual mineral commodity.

All 2003 USGS mineral production data published in this chapter are preliminary estimates as of July 2004 and are expected to change. For some mineral commodities, such as construction sand and gravel, crushed stone, and portland cement, estimates are updated periodically. To obtain the most current information, please contact the appropriate USGS mineral commodity specialist. Specialist contact information may be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals/contacts/comdir.html>; alternatively, specialists' names and telephone numbers may be obtained by calling USGS information at (703) 648-4000 or by calling the USGS Earth Science Information Center at 1-888-ASK-USGS (275-8747). All Mineral Industry Surveys—mineral commodity, State, and country—also may be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals>.

²Values, percentage calculations, and rankings for 2002 may differ from the Minerals Yearbook, Area Reports: Domestic 2002, Volume II, owing to the revision of preliminary 2002 to final 2002 data. Data for 2003 are preliminary and are expected to change; related rankings also may change.

³Zak Lasemi, Geologist and Head, Industrial Minerals (Crushed Stone Resources, Southern Illinois) and Resource Economics Section, Timothy J. Kemmis, Associate Geologist (Sand and Gravel Resources), Donald G. Mikulic, Geologist (Crushed Stone Resources, Northern Illinois), Karan S. Keith, Associate Geologist (Clay Mineralogy and Clay Resources), and Scott P. Koenig, Supportive Geologist, all members of the Illinois State Geological Survey, coauthored the text of the State mineral industry information provided by that agency.

commission to build an industrial park and an underground limestone mining operation in western Bartlett. If approved, Bluff City would mine below and develop the land on top for light industrial manufacturing companies.

Commodity Review

Illinois nonfuel mineral industries faced another challenging year in 2003. Demand remained high for both crushed stone and sand-and-gravel aggregate. For crushed stone, dolomite produced from the Ordovician and Silurian carbonates in northern Illinois accounted for most of the total production. The aggregate industry continued to face strong opposition to new pit and quarry development despite the intense demand for aggregate caused by rapid urban development, especially in northeastern Illinois. The industry was also concerned that the State's budget problems, diversions of money from the road fund to other purposes, and uncertainty about future Federal and State funding for projects to maintain and rebuild infrastructure could reduce demand for crushed stone and sand-and-gravel aggregate. In partial response to the opposition to new pits and quarries, companies continued to evaluate development of underground stone mines. The aggregate industry continued with the reclamation of mined-out sites and, through the Illinois Association of Aggregate Producers (IAAP), provided workshops to promote awareness of the importance of aggregate to construction for the State economy. Finally, in 2003, active research continued to open new markets and expand existing markets for several products, including bricks and concrete blocks produced by blending fly ash with high-quality shales and clays; and mapping fireclay and shale resources near coal-fired powerplants for use with fly ash for brick manufacturing; mapping and characterizing high-quality limestone resources for use in coal-fired powerplant desulfurization scrubbers.

Increased demand across the State for high-quality aggregate continued as a result of increased construction for the Illinois Fund for Infrastructure, Roads, Schools, and Transit (FIRST). The Illinois FIRST program, which was intended to renew the State's aging infrastructure, provided substantial funding for infrastructure repairs and construction and helped reduce the backlog in the number of State and local roads that needed repair. The aggregate industry contributed significantly to this accomplishment by providing the needed raw material, primarily crushed stone and sand and gravel that made up more than 80% of asphalt and concrete pavement. According to IAAP, Illinois produced approximately 99 Mt of crushed stone and sand and gravel in 2003. Illinois hosts a rich supply of quality stone and natural aggregate. From 1970 to 2003, Illinois was consistently one of the top five States in the production of crushed stone and was a major sand-and-gravel producer. Every \$1 million in aggregate sales created 19.5 jobs, and every dollar of industry output returned \$1.58 to the economy.

Termination of the Illinois FIRST program on July 1, 2003, ongoing State budget crises, and uncertainty about reauthorization of the Federal Transportation Equity Act for the 21st Century (TEA-21), which authorized funds for transportation projects, could significantly reduce State and Federal funding for road improvement and repair unless measures are taken to secure additional funds. Reauthorization of TEA-21 was critical for much-needed maintenance and repair of Federal highways and was a major source of demand for the State's crushed stone and sand-and-gravel aggregate. Illinois Department of Transportation (IDOT) predicted that, to be able to continue with maintenance and development of roads for economic development at a rate comparable to the Illinois FIRST program, combined total State and Federal funding in the range of \$12.1 billion to 20.3 billion would be needed during FY 2004-09. The outlook for increased funding for road improvement was not promising. It was expected that State funding for Illinois highways would decrease from \$2.3 billion in FY 2003 to \$1.7 billion in FY 2004 and to \$1.3 billion in FY 2005.

According to IDOT, Illinois had the third largest network of State and local roads and the sixth largest interstate highway system in the country. The State also had more than 26,000 bridges, 8,227 of which were on the State system. IDOT's planned road projects were concentrated in cities and other areas with large population concentrations, including the Champaign-Urbana, Chicago, Jacksonville, and St. Louis Metro East regions. Other projects were planned in and north of Springfield and along Interstate 80.

Construction aggregate sources in Illinois primarily included, in order of abundance, dolomite, limestone, and sand and gravel. Very small amounts of skid-resistant sandstone aggregate were also produced in the southern part of State. No major commercial dimension stone industry existed in Illinois. Northeastern Illinois was one of the leading aggregate producing and consuming regions in the country and will likely remain so long into the future. In the western and southern parts of the State, Mississippian limestones were actively exploited for construction aggregates and other related materials. Limited amounts of Pennsylvanian limestone occurred in the central part of the State and were being mined near the surface. Sand and gravel deposits were widely distributed throughout the State, but they were most abundant and of the highest quality in northeastern Illinois.

In La Salle County, Marseilles Brick Co. was sold to Glen-Gery Corp. Glen-Gery was founded in 1890 and was the fifth leading brick manufacturer in the United States. Its headquarters were in Wyomissing, PA. Glen-Gery had two brick production kilns in operation at its facilities in Marseilles.

The Missouri Department of Transportation (MDOT), which needed about 1 Mt of high-quality construction aggregate for projects in the St. Louis area, came to the East St. Louis-area quarries in southwest Illinois because the quarries in Missouri were unable to meet MDOT's demand. The MDOT requested general information from the ISGS about the available limestone reserves and stone quality at three Illinois quarries under consideration as possible suppliers. The quarries studied the MDOT request for bids, but determined that they would have difficulty meeting the added out-of-State demand.

In the Prairie de Rocher area, Randolph County, Martin Marietta Aggregates mined limestone underground for construction and for high-calcium limestone production. Just to the north, another underground mine that had been inactive for many years was leased from the owner and restarted; several types of aggregate were shipped from this mine by barge, rail, and truck. A new coal-burning powerplant was to be built in Washington County that could buy high-calcium limestone for its scrubbers from one of the Prairie de Rocher mines.

Through IAAP, the Illinois aggregate industry worked to promote greater public awareness of the industry. The nature of mining, the necessity for aggregate resources for economic growth and building and highway construction, modern mining and the environmental practices that were implemented, and reclamation benefits to the community were presented through workshops, the Illinois Science Teachers Association Convention, a science teachers workshop, videotapes and brochures, mine open houses, school visits, and an informative Internet site.

Environmental Issues and Reclamation

Vulcan Materials Company closed its McCook lime plant in Cook County and its Manteno lime plant in Kankakee County owing to residents' complaints about sulfurous odors and dust. The company had hired an environmental engineer to build a scrubber system for its kilns, but could find no economical way to accomplish the installation of a cleaner system. Mineral producers continued to address environmental issues and to actively reclaim their properties to allow new beneficial uses once mining was completed. Many in northeastern Illinois were realizing that reclamation of sand-and-gravel pits into residential communities proved beneficial to everyone. New homeowners in the area received lakefront property from the water-filled pit, the community avoided the creation of another landfill, and the quarry operators made one last large sale on their property. Multiple townships, including Algonquin, Carpentersville, Plainfield, and Warrenville, in the Chicago area were following this line of thinking. Vulcan Materials Company had several reclamation programs, including Vulcan's Casey Quarry, which was the recipient of the 2001 and 2002 Illinois Department of Natural Resources reclamation award for a noncoal facility. The award recognized the accomplishments of the staff at Casey for implementing a consecutive reclamation program that continually generated new aquatic and prairie habitats while minimizing the total "active" areas of the mine. Vulcan was also prepared to dedicate the former Crystal Lake Sand and Gravel facility to the City of Crystal Lake in McHenry County. The facility has been transformed during the last 3 years into Vulcan Lakes, which was one of Illinois' premier habitats that, when finalized, will contain 14 ha of wetlands, 174 ha of stocked lakes, and 34 ha of trees, shrubbery, prairie grass, and beaches. The company put significant effort into developing the facility into an example of the potential end use of mine property.

Since the Mississippi River flood of 1993, the underground limestone mine near Valmeyer, IL, had been inactive. The mine was being transformed into possible commercial, residential, and retail space. Similar mine reclamation and reuse projects have taken place in Quincy, IL, and Kansas City, MO. At Valmeyer, more than 56 ha had been removed, and some areas had reinforced ceilings as high as 12 meters (m). The whole complex was impervious to bad weather, and the temperature held constant at 52° to 58° F year round. Federal and State grants of \$3.5 million were given to install sewer and electrical services.

Construction continued on the Metropolitan Water Reclamation District of Greater Chicago reservoir at Material Service's Thornton Quarry. Material Service Corp. transformed the west lobe of its Thornton Quarry into a temporary stormwater reservoir. This quarry, which was one of the largest in the world, was 360 ha in size and reached a depth of 122 m. The reservoir covered 43 ha and was 30 m deep. It had the capacity to hold 12 billion liters, which the Metropolitan Water Reclamation District estimated could capture a 100-year storm event from the creek nearby. The reservoir will provide flood relief for 10 communities until 2014 when a permanent reservoir will be completed. After the lobe north of Interstate 80 is mined out, the new reservoir should hold as much as 30 billion liters of water and cover 32 ha to a depth of 90 m.

On the State level, several issues were of concern to the industry. The 5% Governor's Office of Management and Budget transfer authority resulted in the "one-time" transfer of \$50 million from the road fund to the State's General Revenue Fund, which reduced funds for construction, maintenance, and repair of State highways. In 2003, the State of Illinois began charging aggregate producers \$5,000 for each National Pollutant Discharge Elimination System discharge permit in force. In August 2003, the aggregates industry, through litigation funded by IAAP, filed suit against the State of Illinois to challenge this fee. A court decision was still pending.

Legislation and Government Programs

Despite increased demand for construction aggregates, it was very difficult to open new pits or quarries in Illinois, and valuable resources continued to be lost to suburban expansion at a rapid rate. Opposition to aggregate mining was no longer limited to populated areas, and the opening or expansion of quarries and pits was being contested by citizens in many rural areas throughout the State.

Applications for aggregate mine expansions and new mines continued to be hotly contested at many local zoning hearings. In 2003, this included hearings in central Illinois at Henry (Marshall County) regarding a petition to mine high-quality reserves along the Illinois River Valley. Ogle County Board members, in the face of strong public opposition, denied a request to open a rock quarry in Monroe Center. The operator had requested 3 years earlier for another parcel of land along Illinois highway 72, which was also denied. The request for quarry operation produced one of the largest zoning hearings the county has ever conducted. Other counties, such as McHenry County in northeastern Illinois, have established advisory councils that meet regularly to discuss mining-related issues and increase dialogue among government, industry, and the public.

In 2003, the ISGS, with partial funding from the Illinois Clean Coal Institute, expanded a preliminary study begun in 2002 to locate and map clay and shale resources with high potential for use in producing fly-ash-supplemented brick within an 81-kilometer radius of four major coal-fired powerplants at Danville, Marion, Meredosia, and Peoria, IL. This research was done in an effort both to provide a market for fly ash, which is a byproduct of coal-derived power generation, and to encourage expansion of existing brick markets. The study examined field and laboratory data to identify clay or shale resources suitable for fly ash brick production. Results of this

study were being used for possible development of a new brick manufacturing operation that would utilize fly ash for brick production.

Industry and government agencies continued to inquire about suitable sources of high-quality limestone for scrubber systems for potential mine-mouth, coal-fired powerplants in Illinois that could be built with State assistance. Limestone and dolomite were used in desulfurization scrubbers, and the powerplants needed an adequate supply of stone nearby. The ISGS secured funding from the State's Department of Commerce and Economic Opportunity through the Illinois Clean Coal Institute to support the mapping and characterizing of suitable carbonate rock resources near coal-fired powerplants throughout the State. Under this project, the ISGS was to create a database on the quality and quantity of limestone and dolomite resources near existing and potential Illinois utility sites in the southern half of the State that could potentially use this material to remove sulfur dioxide from stack gases. The information from this study was expected to be useful to government agencies, limestone producers, and the utility industry seeking the best scrubbing agents for the flue gas desulphurisation or fluidized bed combustion systems to be used at existing or planned coal-fired powerplants.

The Illinois Department of Public Health (IDPH) found that children in the Galena area had high levels of lead in their blood, but it was unclear whether the contamination was caused by past lead mining in the area or by naturally high levels of lead in the soil. IDPH asked the ISGS for all of its available information on lead mining. The ISGS recently received all of the drilling records and mine maps for the northwestern Illinois lead-zinc district from EaglePicher's now-closed Galena office. In addition to records from post-World War II mining and exploration activities, the archives included working maps of mines and drilling sites and records from leased properties operated by EaglePicher and other companies, some going as far back as 1900. These records and maps were expected to prove invaluable to understanding the lead contamination problem in the Galena area.

Illinois' nonfuel mineral industries were expected to be faced with several challenging issues in the coming years: the need to ensure adequate government funding for continued infrastructure improvements, to solve the problem of how to supply aggregate for the rapidly growing Chicago and Metropolitan East St. Louis areas, to resolve the conflicting public demands to protect wetlands and yet make it possible to exploit needed resources, and to assess the success of newly developed mineral products. The repair and maintenance of the highway system required availability of local high-quality aggregate. With aggregate composing approximately 85% of concrete pavements and about 97% of asphalt, high-quality aggregate will continue to be in high demand throughout the State for many years to come.

With increased demand for high-quality construction aggregates, ISGS industrial minerals geologists responded to an increase in requests for objective information from government agencies, industry, and the public on several issues including the availability of aggregate resources for construction, environmental remediation, and the environmental impacts of aggregate mining. The aggregate industry continued to seek information from the ISGS about local geology as companies prospected for new high-quality aggregate and scrubber stone resources across the State.

Innovative new ways to use mining byproducts, such as fly ash, were being developed and had promise for making use of what was otherwise wasted. Laboratory and in-plant tests conducted at the ISGS showed that fly ash from Illinois coals could successfully replace sand as the main ingredient in autoclaved aerated concrete blocks. The fire-resistant building material, which has long been used in Europe and the Middle East, was only recently introduced to the North American market. Based on laboratory and small-scale in-plant tests, two fly ashes were to be selected for pilot-scale demonstration tests at the Babb International manufacturing plant in Adel, GA.

Reference Cited

American Iron and Steel Institute, 2004, Pig iron and raw steel production—Final 2003, AIS-7, subsection of Annual statistical report 2003: Washington, DC, American Iron and Steel Institute, 130 p.

TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN ILLINOIS^{1, 2}

(Thousand metric tons and thousand dollars)

Mineral	2001		2002		2003 ^b	
	Quantity	Value	Quantity	Value	Quantity	Value
Cement, portland	2,870	214,000 ^c	2,770	204,000 ^c	2,800	207,000 ^c
Clays:						
Common	198	972	181	856	181	856
Fuller's earth	367	34,200	W	W	W	W
Gemstones	NA	8	NA	28	NA	28
Sand and gravel:						
Construction	35,000	156,000	32,000	146,000	33,200	153,000
Industrial	4,460	72,100	4,510	72,800	4,510	72,900
Stone, crushed ³	80,700	459,000	75,200	431,000	72,600	421,000
Combined values of lime, peat, stone (crushed sandstone), tripoli, and values indicated by symbol W	XX	57,400	XX	62,100	XX	55,700
Total	XX	993,000	XX	917,000	XX	911,000

^cEstimated. ^bPreliminary. NA Not available. W Withheld to avoid disclosing company proprietary data; value included with "Combined values" data.
XX Not applicable.

¹Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

²Data are rounded to three significant digits; may not add to totals shown.

³Excludes certain stones; value included with "Combined values" data.

TABLE 2
ILLINOIS: CRUSHED STONE SOLD OR USED, BY KIND¹

Kind	2001				2002			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone ²	116	63,300 ^r	\$360,000 ^r	\$5.68 ^r	110	58,400	\$335,000	\$5.72
Dolomite	20	17,300 ^r	99,200 ^r	5.72	19	16,700	96,300	5.76
Sandstone	1	W	W	W	1	W	W	W
Total	XX	80,700	459,000	5.69	XX	75,200	431,000	5.73

^rRevised. W Withheld to avoid disclosing company proprietary data. XX Not applicable.

¹Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

²Includes limestone-dolomite reported with no distinction between the two.

TABLE 3
ILLINOIS: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2002, BY USE¹

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Construction:			
Coarse aggregate (+1 1/2 inch):			
Macadam	874	\$5,800	\$6.63
Riprap and jetty stone	338	3,780	11.20
Filter stone	406	1,890	4.65
Other coarse aggregates	160	918	5.74
Total or average	1,780	12,400	6.96
Coarse aggregate, graded:			
Concrete aggregate, coarse	7,460	52,700	7.07
Bituminous aggregate, coarse	3,670	28,700	7.80
Bituminous surface-treatment aggregate	336	2,360	7.02
Railroad ballast	430	2,790	6.49
Other graded coarse aggregates	159	921	5.79
Total or average	12,100	87,500	7.25
Fine aggregate (-3/8 inch):			
Stone sand, concrete	984	5,500	5.59
Stone sand, bituminous mix or seal	374	2,120	5.66
Screening, undesignated	676	2,670	3.96
Other fine aggregates	147	753	5.12
Total or average	2,180	11,000	5.06
Coarse and fine aggregates:			
Graded road base or subbase	10,700	53,300	4.98
Unpaved road surfacing	1,050	5,920	5.64
Crusher run or fill or waste	158	798	5.05
Other coarse and fine aggregates	754	3,450	4.57
Total or average	12,700	63,400	5.01
Other construction materials	878	6,900	7.85
Agricultural:			
Limestone	1,240	5,850	4.71
Poultry grit and mineral food	W	W	3.75
Other agricultural uses	6	26	4.33
Total or average	1,250	5,880	4.71
Chemical and metallurgical:			
Cement manufacture	2,310	17,200	7.45
Lime manufacture	(2)	(2)	4.96
Special, mine dusting or acid water treatment	(2)	(2)	8.78
Other miscellaneous uses and specified uses not listed	58	420	7.24
Unspecified: ³			
Reported	27,000	153,000	5.68
Estimated	15,000	71,000	4.86
Total or average	41,700	225,000	5.39
Grand total or average	75,200	431,000	5.73

W Withheld to avoid disclosing company proprietary data; included with "Other."

¹Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

²Withheld to avoid disclosing company proprietary data; included in "Grand total."

³Reported and estimated production without a breakdown by end use.

TABLE 4
ILLINOIS: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2002, BY USE AND DISTRICT¹

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3		District 4	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Construction:								
Coarse aggregate (+1 1/2 inch) ²	1,290	8,590	W	W	224	1,870	W	W
Coarse aggregate, graded ³	W	W	W	W	W	W	2,150	13,400
Fine aggregate (-3/8 inch) ⁴	W	W	W	W	W	W	293	1,570
Coarse and fine aggregates ⁵	8,430	41,600	W	W	W	W	1,740	8,820
Other construction materials	878	6,900	--	--	--	--	--	--
Agricultural ⁶	368	1,560	W	W	W	W	466	2,080
Chemical and metallurgical ⁷	W	W	--	--	W	W	--	--
Special ⁸	--	--	--	--	--	--	W	W
Other miscellaneous uses and specified uses not listed	--	--	--	--	--	--	58	420
Unspecified: ⁹								
Reported	17,400	103,000	1,940	12,500	1,680	9,350	6,060	29,000
Estimated	3,600	17,000	3,300	17,000	3,800	20,000	3,900	17,000
Total	41,100	243,000	5,640	32,100	13,600	81,900	14,900	74,300

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes filter stone, macadam, riprap and jetty stone, and other coarse aggregates.

³Includes bituminous aggregate (coarse), bituminous surface-treatment aggregate, concrete aggregate (coarse), railroad ballast, and other graded aggregates.

⁴Includes stone sand (bituminous mix or seal), stone sand (concrete), screening (undesignated), and other fine aggregates.

⁵Includes crusher run (select material or fill), graded road base or subbase, unpaved road surfacing, and other coarse and fine aggregates.

⁶Includes agricultural limestone, poultry grit and mineral food, and other agricultural uses.

⁷Includes cement and lime manufacture.

⁸Includes mine dusting or acid water treatment.

⁹Reported and estimated production without a breakdown by end use.

TABLE 5
ILLINOIS: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2002,
BY MAJOR USE CATEGORY¹

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate (including concrete sand)	6,570	\$31,500	\$4.80
Plaster and gunitite sands	376	1,830	4.86
Concrete products (blocks, bricks, pipe, decorative, etc.)	401	1,990	4.95
Asphaltic concrete aggregates and other bituminous mixtures	1,550	7,860	5.05
Road base and coverings ²	3,960	21,700	5.48
Fill	2,090	8,170	3.91
Snow and ice control	18	119	6.61
Other miscellaneous uses ³	72	585	8.13
Unspecified: ⁴			
Reported	9,090	37,800	4.16
Estimated	7,900	35,000	4.39
Total or average	32,000	146,000	4.57

¹Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

²Includes road and other stabilization (cement, and lime).

³Includes roofing granules.

⁴Reported and estimated production without a breakdown by end use.

TABLE 6
ILLINOIS: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2002, BY USE AND DISTRICT¹

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products ²	2,460	12,800	1,300	5,740	2,310	11,200
Asphaltic concrete aggregates and other bituminous mixtures	879	4,080	W	W	557	3,360
Road base and coverings ³	2,060	10,900	333	1,460	1,100	7,020
Fill	W	W	583	1,770	592	2,480
Snow and ice control	W	W	W	W	11	48
Other miscellaneous uses ⁴	729	3,410	81	382	53	443
Unspecified: ⁵						
Reported	6,480	27,100	846	3,490	1,760	7,180
Estimated	4,300	19,000	390	1,700	1,700	7,200
Total	16,900	77,400	3,530	14,600	8,080	38,900

Use	District 4	
	Quantity	Value
Concrete aggregate and concrete products ²	1,280	5,610
Asphaltic concrete aggregates and other bituminous mixtures	W	W
Road base and coverings ³	476	2,310
Fill	W	W
Snow and ice control	1	(6)
Other miscellaneous uses ⁴	243	762
Unspecified: ⁵		
Reported	5	25
Estimated	1,500	6,500
Total	3,470	15,300

W Withheld to avoid disclosing company proprietary data; included in "Other miscellaneous uses."

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes plaster and gunite sands.

³Includes road and other stabilization (cement and lime).

⁴Includes roofing granules.

⁵Reported and estimated production without a breakdown by end use.

⁶Less than 1/2 unit.